ABSTRACT OF THE DISCLOSURE

A process for continuous composite coextrusion comprising: (a) forming first a material-laden composition comprising a thermoplastic polymer and at least about 40 volume % of a ceramic or metallic particulate in a manner such that the composition has a substantially cylindrical geometry and thus can be used as a substantially cylindrical feed rod; (b) forming a hole down the symmetrical axis of the feed rod; (c) inserting the start of a continuous spool of ceramic fiber, metal fiber or carbon fiber through the hole in the feed rod; (d) extruding the feed rod and spool simultaneously to form a continuous filament consisting of a green matrix material completely surrounding a dense fiber reinforcement and said filament having an average diameter that is less than the average diameter of the feed rod; and (e) depositing the continuous filament into a desired architecture which preferably is determined from specific loading conditions of the desired object and CAD design of the object to provide a green fiber reinforced composite object.

Banner & Witcoff, Ltd.
Ten South Wacker Drive
Chicago, Illinois 60606
(312) 715-1000